

NEWEST SCIENTIFIC DISCOVERIES & REMARKABLE FACTS

Eugenics and ULTIMATE Man, Heredity and RACE Betterment, Continue to STIR SCIENTISTS

RACE betterment, eugenics and the ultimate man are subjects which continue to stir the world of science, medicine and study.

Luther Burbank, plant specialist, recently said the race could be improved only by constant selection and weeding out of the best and cultivating its human production. Caspar L. Redfield, at a San Francisco eugenics conference, maintained it was possible to take very inferior human stock and develop it by careful breeding into eminent men, as fine horses and cattle are bred, and all in less than 200 years.

"Abundant, well balanced nourishment and thorough culture of plants or animals," said Luther Burbank, "will always produce good results in holding any species or variety up to its best hereditary possibilities, beyond which it cannot carry them, and lacking which, maximum development can never be realized. But the sharp line must always be drawn between the transient results temporarily attained through favorable environment and the permanent results of selection of the best individuals for continuing the race."

"What would be the result if all apple, plum, corn, melon or petunia seed was indiscriminately planted? Soon worthless mongrels only, having no character and no value for any purpose."

"Only by constant selection of the best can any race ever be improved. No education, no environment of any nature can ever make any appreciable progress, even though these same favorable surroundings may produce through ages a definite but infinitely slow increment, which by constant repetition becomes slowly available in heredity, but by no means fixed, so that reproduction true to the better type can be depended upon."

"It is becoming increasingly necessary to impress the fact that there are two distinct lines in the improvement of any race: one by favorable environment which brings individuals up to their best possibilities; the other ten thousand times more important and effective—selection of the best individuals through a series of generations. By this means and by this only can any race of plants, animals or man be permanently or radically improved. When these two lines of action are combined, all the best qualities of any type are brought forth and fixed—and the field for improvement is limitless."

Dr. J. H. Kellogg, of Battle Creek, Mich., held the world needed a new aristocracy—"a real aristocracy made up of Apollos and Venuses and their fortunate progeny."

"Instead of such an aristocracy," he continued, "we are actually building up an aristocracy of lunatics, idiots, paupers and criminals. These unfit persons already have reached the proportions of a vast multitude: 500,000 lunatics, 80,000 criminals, 100,000 paupers, 90,000 epileptics, and we are supporting these defectives in idleness like real aristocrats, at an expense of \$100,000,000 a year, and this mighty host of mental and moral cripples is increasingly due to unrestricted marriage and other degenerative influences at a more rapid rate than the sounder part of the population so that they are bound in time to constitute the majority unless some check is put upon the increase. Every one of these lunatics possesses the right to vote, even in states where women are not given the right of franchise."

Dr. Kellogg proposes a "Scheme for Race Betterment," which he thought should be set in operation as speedily as possible. This included the establishment of a "health registry," on which should be recorded the results of an annual health inspection of individuals made by a bureau maintained by the state for the purpose and of a "eugenics registry" to accomplish in behalf of race hygiene "what the health registry would seek to do for personal health."

The feud between eugenics experts as to whether persons should marry early or late in life and as to whether the offspring of old parents is superior intellectually to the children of younger ones was fanned to white heat at the International Purity conference. Mr. Redfield, leader of one faction of scientists, held the view that the marriage of young persons should be avoided. He maintained that rapid breeding inevitably led to the production of inferior stock, no matter what the original stock may be. He said slow breeding was an essential to the production of superior stock, and when properly used inferior stock could be transformed into superior stock in about a single century. The breeding of real eminence requires an additional century.

After a study of the births of 1,800 children made from the genealogies of New England families of the seventeenth and eighteenth centuries, he has reached

the conclusion that eminent men are not produced in the same way that ordinary men are produced. He finds that there is in their pedigrees a shortage of young fathers and an excess of old ones, a fact which shows that they are produced by breeding which is much slower than the normal rate.

Roswell Hill Johnson, professor of biology and geology at the University of Pittsburgh, was the leader of the faction diametrically opposed to the views of Mr. Redfield. Prof. Johnson called attention to the fact that inferior stocks generally marry early and produce numerous offspring, while superior stocks habitually marry late and produce few offspring. He realizes there are two ways of remedying the situation. One is to revise the laws so as to prevent early marriages and the other is to encourage the early marriage of those considered superior individuals. Prof. Johnson advocates the second method, urging the early marriage of superior men and women.

"I am more inclined to lean toward Prof. Johnson's idea," says Paul Pope, editor of The Journal of Heredity, organ of the American Genetic association. "I desire exactly what he wants—to raise the general level of the race by a selective birth rate: to get more children from the eugenically fit and fewer from the unfit. That is eugenics."

Mating is much more difficult among human beings than among the inferior animals. Prof. Johnson points out. In the inferior animals, because of the larger role of instinct and the lesser role of social regulation and judgment, nearly all the individuals mate. But in the modern man there is the contrast of an unprecedented number of unmated individuals. This condition, says Prof. Johnson, has developed with the growth of romantic love, which is the exclusive preference for a very long period for one mate over all others. This tendency has been very much accentuated from the time of Petrarch, the first modern man, down to the present day.

DANGER Lurks in SUN BATH, EXPERTS Say

DANGER lurks in the sun bath, medical specialists have concluded. The damage is more than the sunburn resulting, as shown by two cases in which headache and symptoms of meningitis developed after two boys had been lying in the bright sunlight on a bathing beach.

Nervous people are said particularly to be predisposed to injury and specialists affirm that anemic and nervous people make sun-bathing most popular. A tanned and vascular skin is said to protect against injury from the sun's rays, but the city dweller's skin is neither pigmented nor vascular.

Instead of being benefited, the nervous are rendered more nervous and when the summer is over they are tanned, but otherwise in poorer condition than before.

Thousand Children Killed by Matches

ONE THOUSAND children died during the past year as a result of eating the tips of matches. Fire damage, traced to matches as the primary cause, amounted to \$30,000,000 in the same period of time. Less than 2 per cent of all the fires are caused by electricity.

These statistics, gathered by Mrs. Frank A. Pattison, manager of the Household Experiment station of the New Jersey Federation of Women's Clubs, are used by her in campaigning for safety in the home.

This "Ghost" Proved Profitable

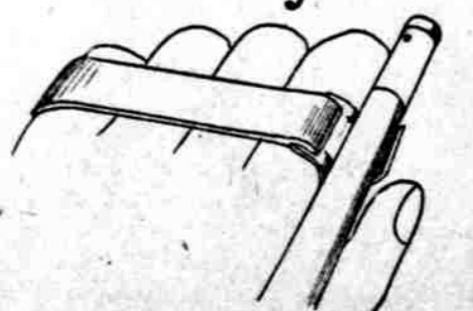
SHREVEPORT, LA., has a "ghost," to see which its "owner" forced thousands of inquisitive folk to pay admissions of ten and twenty-five cents. The ghost was the summer's sensation in that section of the state. It was discovered in the form of a little girl, neatly dressed, in the screened doorway leading to the porch of B. M. Dorritt's home—a shadow, but perfectly outlined and originating in mystery.

Dorritt thought the reflection from a street arc light on the bannister of his porch caused the phenomenon, while others maintained leaves on nearby trees cast the shadow. Regardless of its cause the "ghost" became the city's problem.

While mending an automobile tire in front of the Dorritt home one night, four young men glanced at the doorway and seeing what they thought was a young girl cautioned each other to remain quiet. Investigation, due to the stillness of the figure, showed it was a shadow on the door screen. Slowly the news of the "ghost" traveled and each night brought an increasing crowd to the Dorritt home.

Neighbors complained and the city authorities took steps to curb the curious. The street arc light was cut off. Dorritt was impressed with the possibilities of his "ghost" and erected a private light in his yard on a line with the street

Cue GUIDE for POOL Players



AN Illinois inventor is paving the way for everyone to become a pool expert. He has just patented a cue-guide, which consists of a curved plate extending from its convex side and attached by a band over the hand.

Aerial Torpedoes Used by Allies



THIS is one of the aerial torpedoes used by the allies against the Germans in France and Flanders. The trench-gun is a 58 mm., and throws a torpedo-shell, "winged," so that it gyrates and so keeps a straight course. To the body of the shell is fixed a rod which fits into the barrel of the gun. The shell explodes laterally and is calculated to do

a very great deal of damage. This is but one of the weapons akin to those used by the natives brought into trench warfare by the world war, although it is true that the projectiles hurled are far deadlier than, for instance, the stones thrown by the ancient Roman catapult, the bolts of the cross-bows, and the arrows of the ordinary bows.

Thunder LIZARD, Weighing 20 Tons, Once ROAMED Wyoming AIR Depression KILLS Soldiers

A LIZARD seventy feet long and sixteen feet high, with an estimated weight of from eighteen to twenty tons—that is one of the largest specimens of prehistoric plant-eating dinosaur ever found in America. The fossil remains of this huge brontosaurus, or thunder lizard, were found by Professor Marsh at Como Bluff, Wyoming.

This remarkable specimen had an extremely long tail and a long neck, while its head was but little larger than that of a horse. The animal doubtless lived on the luxuriant tropical vegetation, but how its enormous bulk could be sustained by such food as could pass through its ridiculously small mouth has caused scientists to wonder. It is not certain whether the name "thunder lizard" was given it because of its size or because of the large sum—\$10,000—which Professor Marsh spent in excavating and preparing the fossil.

Como Bluff is classic ground to those interested in the fossil remains of animals that inhabited this region long ages ago, for it was here that the first dinosaur bones were discovered in the Rocky mountain region. Some of the dinosaurs were the largest land animals that ever walked the earth, and some were very diminutive. They differed greatly in size, shape, structure, and habits.

Some were plant eaters; others fed on flesh. Some walked on four feet; others with small, weak fore limbs walked entirely on the strongly developed hind legs. Some had reptilelike feet; others were bird footed. Some had toes provided with long, sharp claws; others had flattened hoof-like nails.

There were dinosaurs with small heads, and others with large heads. Some were large and cumbersome; others were small, light, and graceful and so much resembled birds in their structure that only the skilled anatomist can distinguish their remains. Some of enormous size were clad in coats of bony armor, which gave them a most bizarre appearance.

Some dinosaurs that are even larger

Austria's New Gun

Austria is said to be employing a gun of remarkable type. It is mounted on an automobile capable of a speed of forty miles an hour, and carrying 140 shells. These shells, which are fired almost vertically, are partly like grenades and partly like shrapnel. Should they miss their actual target, they burst about 100 yards farther on.

CAN YOU Read This Little ODE

Homonyms, or words of familiar sound but spelled differently, have provided Hudson Harlan, of Wakeeney, Kan., with a peculiarly alliterative "ode." He perpetrated the strain recently, with the explanation that "the poetical was weakened a little in a few places for the sake of sound."

If you read the poem rapidly, giving the words their ordinary pronunciation and forgetting for the time what they mean, you will, by paying attention only to the sound of them, be able to gather what the sense is.

Ann Owed Tomb Ice Cool Buoy Daze.
Hears two hours cool so fears sage.
Inn with weal urned tour Eden's spell.
Too wright ailed wedge weed dune oh.
Sew aasel leal earned whence study dwell.

All lac three buoy augur earl ink lined
Two waist hissed thyme in idyl weighs
Nor odd wasp paired twos purr them mined;
Meant law towers cool sin old end daze.

Threw Tyre sum ours node out weal lead
With the forte pars Oh! visor Moore!
Knot awl Bent a hour lessen red.
Gnawer knee their Buckner some gale oar.

Sow youth full lied seas howda chute
Men twirk toot each; butt eye wreak caul
Own lea suite dais, sum lessen soot:
Ace "noch play sin Thyme's grate haul.

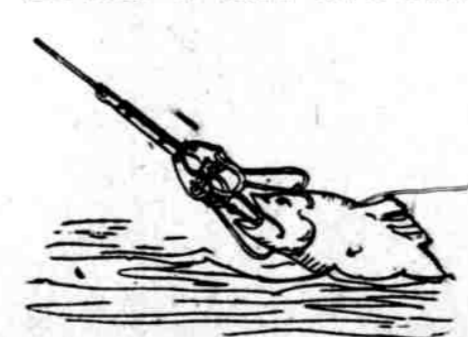
A doo reed mice imp pull load
A fl please Sioux wonder stanzas
Rite just ailing "oma 1 Abe. Ode.
H. Harlan, in Wakeeney, Kansas.

ATMOSPHERIC depression produced by the explosion of shells is maintained as the cause of death of troops found unwounded on the field of battle in Europe, according to Alphonse Arnoux, eminent French engineer.

An officer recently sent M. Arnoux a pocket aneroid barometer damaged by the explosion of a shell only three yards away from it. Experiments showed the explosion had caused an atmospheric depression of about 350 millimeters of the mercury tube, corresponding to a dynamic pressure of ten tons to the square yard.

Troops exposed to this violent change met with conditions similar to those experienced by aeronauts who ascend too fast or workmen who leave compressed air chambers without taking proper precautions, the effect being to liberate the air and carbonic acid suspended in the blood and transform them into bubbles of gas. These bubbles are driven by the action of the heart into the capillary vessels, stopping the circulation and causing instant death.

No Escape From THIS Fish Hook



NO longer can the boasting fisherman set forth the story of how the "biggest one got away." A Texan's invention makes it impossible for the big ones to "get away"—providing, of course, they "get on." He has patented a grapple bearing four hooks, one in the center a bait hook and longer than the rest. Its action regulates the action of the other three and when it is pulled the other hooks clinch. The unfortunate fish that pulls hardest becomes only the more securely fastened.

Government veterinarians in the Philippines have found that cattle can be immunized against rinderpest with a loss of less than 1 per cent of the animals.

SKUNK Now Hailed as TRUE FRIEND of Hard Toiling Farmer

THE New York legislature promises to come to the relief of the poor, down-trodden skunk. The biologist of the United States department of agriculture had much to do with this attitude because of his recent report on the good accomplished by the little animal. Legislators accepted his version and made preparations for a bill for the preservation of the skunk race.

The biologist says the skunk is the best-known enemy of army worms, including the common army worm, the wheat-head army worm and the Famm army worm, all of which are destructive to some grains, corn and grasses and cause heavy losses every year.

Farmers know that where white grubs are particularly abundant in cornfields there are many little round holes burrowed in the ground about hills of corn. These are made by skunks in their nightly search for grubs. During a pest of grasshoppers in Kansas it was determined that in many cases a large proportion of the food of skunks consisted of grasshoppers.

Strawberry growers regard the skunk with favor, although in its eager search for grubs it may uproot a plant or two or eat a few berries. The skunk also enjoys May beetles and June bugs which hatch from white grubs.

Skunks have versatile appetites. They feast on the hop grubs, cutworms, crickets, sphinx moths, sweet potato beetles, Colorado potato beetles, field mice and rats. If a skunk takes up a residence near a barn where rats are, if not disturbed, it will stay there until all the rats are gone.

Two kinds of tobacco worms, which also attack tomato and potato plants, are eaten by the skunk in large numbers. Some of the most destructive insects do their work below ground and out of reach of any method the farmer can devise. It is against these that the skunk is most active.

The biologist asserts that the belief held in many districts that the bite of the skunk produces hydrophobia is mistaken. He says it is no more harmful than the bite of other animals.

BANANA Trade in Jamaica a Hard HIT by the War

BANANAS down, rum up—such is the price fluctuation on Jamaica's products as a direct result of the war. Poor transportation facilities and the perishable nature of fruit, the island's principal commodity, have forced bananas to the lowest price in history.

The effect of the war conditions in Jamaica is exhibited in the customs collections. Since August, 1914, imports and exports have decreased 12 per cent, while excise revenue has fallen to an even greater extent. The falling off in exports is due almost entirely to the lack of adequate shipping.

Bananas, representing 60 per cent of the total exports, have fallen by almost one-half and this in a year when the crop is the largest in the island's history. The colony, in fact, has had a record production in almost all lines, but total exports are almost one-third less than in normal years. As a consequence perishable commodities are wasted and in some places surplus fruit for banana plantations, not protected by firm contracts with the fruit trading companies, can not find buyers at three cents per bunch.

It is the very irony of fate that after the hurricane of 1912 and a period of almost constant drought in some sections since 1909, just when the seasons rains have been the best since the year 1906, with a record crop both as regards quality and quantity, the island should be placed in a position where it can not market its product for lack of vessels to carry it. The situation has been somewhat relieved by the action of the imperial government in arranging for ocean transport for some of the surplus sugar stocks, but this benefit to the island as a whole is small, as sugar occupies but a comparatively insignificant position in the bulk of the colony's exports.

One reassuring feature of the situation is the present high prices of special products, which, in a measure, help to compensate for other losses. For instance, rum and sugar have soared to a point which has not been attained in the present generation. Rum stands at double ante-war prices, varying according to quality from eighty-seven cents to one dollar per imperial gallon, while sugar is practically five dollars per hundred weight. At these prices a very handsome margin is left over for cost of production, certainly not less than 50 per cent on capital invested.

Asbestos Most Useful Mineral

ASBESTOS is a potential life-saver. Its incombustibility and its fibrous structure make it one of the most useful minerals—for such it is—for many and various purposes.

Nearly every theater curtain is now made of asbestos. Though it primarily is of rock substance it is converted into soft and pliable condition, as easy to work with as cotton or wool. The material is used in making lumber, roofing, plaster and stucco. Aside from its incombustibility, asbestos has another virtue in its power as a nonconductor, and persons living in a house wherein asbestos forms a part of the material are assured of comfort in extreme heat or cold.